

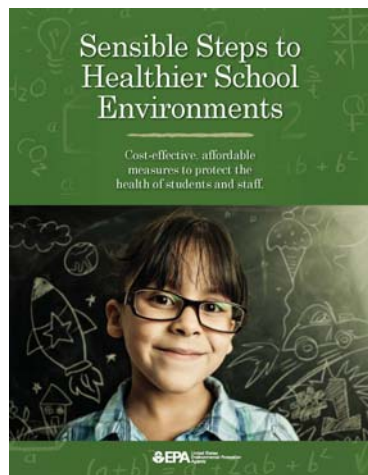
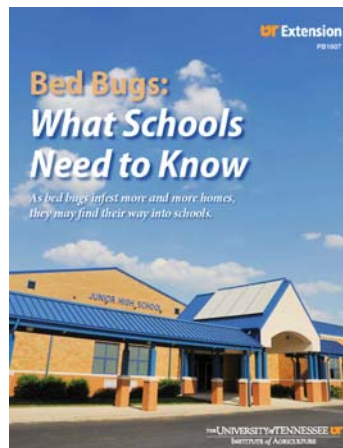


Pests and Pesticides in Child-serving Facilities: An IPM Newsletter

Bed Bugs: What Schools Need to Know

Karen M. Vail

Tennessee and many other states have seen an increased number of bed bug infestations troubling residents. As bed bugs infest more and more homes, they may find their way into schools. In this publication we note the actions school personnel need to take to prevent infestations and stop the bugs from spreading in the school setting. Examples of letters to be sent home are provided (http://schoolipm.utk.edu/success_results.html)



Sensible Steps to Healthier School Environments

Maryann Suero, EPA

We are pleased to announce the new resource, "**Sensible Steps to Healthier School Environments.**" This easy to use booklet focuses on affordable, sensible ways to address some of the most common areas of environmental health concerns found in schools.

In this era of budget tightening and unfortunate education funding cuts, the booklet is designed to identify and address environmental health issues that school districts can readily address with minimal cost and effort. It is a resource for facilities personnel and school staff, providing:

- **one-stop access** to learn about a range of school environmental health issues;
- **many low cost/no cost**, affordable measures, programs and resources available to help prevent, reduce and resolve each of the highlighted environmental hazards;
- a voluntary **Quick Assessment Checklist** to identify those issues that school districts and schools can address with minimal cost and effort; and, waste reduction and energy efficiency actions that will help you **conserve valuable financial resources.**

Special Points of Interest

- > New Pubs released:
Bed Bugs: What Schools Need to Know
- Sensible Steps to Healthier School Environments
- > Preventing Mosquito Bites and American Roaches
- > Upcoming Webinars
Outdoor/Field IPM
Pest Proofing and Exclusion

This issue

Two New Pubs: Bed Bugs in Schools and Healthier School Env.	1
Preventing Mosquito Bites and American Roaches	2
Webinars: Outdoor IPM, Pest-Proofing, and Pesticide Residues Indoors	3
UT YEAH Contacts	5
Links	5

While this booklet provides best management practices, it does not preempt, supersede or serve as a substitute for Federal, State, local and Tribal regulations that are applicable to schools.

The booklet is available at : <http://www.epa.gov/region8/humanhealth/children/SensibleSteps.pdf>
In addition to "Sensible Steps to Healthier School Environments", EPA also furnishes a wealth of valuable information and resources on many available web sites. To learn more, go to: <http://epa.gov/schools> .

Preventing Mosquito Bites and Managing American Cockroaches

Karen M. Vail

Just as we were getting ready to release this newsletter, Mike Merchant, Urban Entomology Specialist of Texas Agrilife Extension, released two blogs on his *Insects in the City* site, <http://Insectsinthecity.blogspot.com/>, that I think are pertinent to reducing risks from pests and pesticides in the Tennessee school environment.

Mike's article released Thursday, August 23, is in response to the West Nile Virus outbreak in Texas and describes actions that schools can take to reduce mosquito populations and their bites around schools. I refer you to this article at <http://Insectsinthecity.blogspot.com/> . While not all comments pertain to Tennessee, for instance, I'm not aware of any aerial area-wide spraying for mosquitoes, many comments are very applicable. We've also recently released a newsletter article on preventing mosquito bites which should be posted to our departmental web site under Issue-3-2012 at <http://eppserver.ag.utk.edu/Whats/whatshap.htm> .

According to the Tennessee Department of Health, as August 23, 2012 (http://health.state.tn.us/CEDS/WNV/wnv_report.asp), only five human cases of WNV have been reported in three Tennessee counties (Shelby, Greene and Hickman) this year with the majority of mosquitoes containing the virus found in Shelby Co. In contrast, 10 human cases of LaCrosse Virus have been reported from four eastern Tennessee counties (Union, Knox, Claiborne and Bledsoe). LaCrosse Virus may be spread by container-breeding mosquitoes, such as the eastern treehole mosquito (*Ochlerotatus triseriatus*), the Asian tiger mosquito (*Aedes albopictus*), and the Asian bush mosquito (*Ochlerotatus japonicas*). Both infections can cause flu-like symptoms and, in a small percentage of folks, can cause neurological impairment, even death. For a complete description of the disease symptoms, see <http://www.cdc.gov/ncidod/dvbid/arbor/arbdet.htm>. While severe symptoms for West Nile Virus are often seen in the elderly, LaCrosse encephalitis generally affects children under the age of 16. One child died in East TN due to La-Crosse virus infection this summer.

Please read the above articles carefully. Wearing repellent is one of the best ways to protect oneself from being bitten. Because repellents are applied to a person, it's my understanding that the Tennessee Department of Agriculture does not require that they be applied under a licensed operator, as indicated in TCA 62-12-124. Educate folks about wearing repellent. Decide where repellents can be stored, who will apply them and what formulations are suggested. Reduce standing water and if it can't be removed, treat it with Bti (*Bacillus thuringiensis israeliensis*) or methoprene to kill the larvae. Wear loose-fitting clothes and avoid areas with heavy mosquito populations. Avoid areas with overgrown vegetation which may be harboring resting mosquitoes during the day time. Limit time outdoors during dusk and dawn, although the Asian tiger mosquito can be active during the day. If necessary, the underside of foliage can be sprayed with a pyrethroid to treat mosquito daytime resting sites. Be sure to follow the label and the tenets of IPM (schoolipm.utk.edu).



Eastern treehole mosquito. Susan Ellis, bugwood.org



Asian tiger mosquito. Susan Ellis, bugwood.org

On Tuesday, August, 21, Mike released an article called the "[Ugly American](#)." No, it was not about US human citizens, but instead, about the American cockroach. *Periplaneta americana* is one of the most common pests found in West Tennessee schools. In this article Mike described the storm and sewer drains as common habitat of the American roach and indicated that many school infestations are due to these roaches entering through dry drain traps. He describes the importance of keeping water in the p-trap of the drain to keep sewer odors at bay and deter pests from entering. He also mentioned the use of membrane devices, such as Trapgard and Sureseal, that are installed in the drain and allow water to drain but close in between water flow. Installing the devices may provide a long-term solution to smelly odors and roach entry. Reducing the number of American roaches will also reduce the amount food available to rodents. To the right is damage and signs of a heavy American roach infestation in a undisturbed storage closet. This infestation was also due to dry p-traps. Relief was provided by Fudd Graham, Auburn University IPM in Schools Director, with more than two tubes of Advion cockroach bait and a recommendation for a Trapguard-like device.



Upcoming Webinars

Outdoor and Field School IPM

Zach Bruns, IPM Institute

Join us for a Webinar on August 28

Space is limited. Reserve your Webinar seat now at:

<https://www1.gotomeeting.com/register/966262392>

The challenges of outdoor pest management are discussed, beginning with dumpsters and waste disposal areas, recycling areas, rodent management, the importance of the elimination of standing water, and school fields.

School lawns are often multifunctional as athletic fields, picnic sites, outdoor classrooms and general recreational areas for the community. Heavy use of lawns and athletic fields causes stress that predisposes grass to attack by weeds, insects, pathogens and moles. As a result, many different pesticides are often applied to school lawns. Because the bodies of children may be in direct contact with the grass, the use of pesticides on these lawns is of increasing concern to parents and health professionals. However, coaches and school administrators are under pressure to ensure the quality and safety of turf fields for use by students and the community. What can be done to address the cause of turf problems rather than treating the symptoms? Managing turfgrass pests must not depend entirely on chemical inputs (fertilizer, herbicides, fungicides and insecticides), but should incorporate a variety of non-chemical/cultural techniques. This webinar will show you how to incorporate IPM into the school's daily outdoor management routine. Success also requires active working relationships between the IPM coordinator, school administrators and those responsible for turfgrass care.

Title: Outdoor and Field School IPM

Date: Tuesday, August 28, 2012

Time: 10:00 AM - 11:30 AM EDT

After registering you will receive a confirmation email containing information about joining the Webinar.

System Requirements

PC-based attendees require: Windows® 7, Vista, XP or 2003 Server

Macintosh®-based attendees require: Mac OS® X 10.5 or newer

Upcoming Webinars Continued

Pest Proofing and Exclusion – getting ready for winter

As summer winds down and we prepare for fall and winter – are your school buildings ready? Did you know a typical house mouse only needs the size of a dime (1/4 inch) to squeeze into your building? Your average roof rat or Norway rat only needs the size of a quarter to enter a structure. Crickets, outdoor cockroaches and other crawling pests can gain entrance into your structure with less than ¼-inch gap under a door. This informative webinar will discuss how you can prevent pest problems from happening and learn how you and your staff can help by not only preventing pests, but also making your school buildings healthier. Our featured speakers are Drs. Thomas Green and Fudd Graham. Tom has been a national leader in Integrated Pest Management (IPM) for more than twenty years and has dedicated his career to helping to improve health, environment, and economics through IPM. Dr. Fudd Graham holds a B.S. in Animal Science and a PhD in Entomology. Currently Auburn University Department of Entomology and Plant Pathology's coordinator of the Alabama Fire Ant Program, he also is co-leader for the eXtension Urban IPM program and oversees the Alabama effort for school IPM. Fudd also holds a pest control license in the state of Alabama and has used IPM in his pest control business for over 20 years. Ms. Janet Hurley, Extension Program Specialist for School IPM at Texas AgriLife Extension Service, will help facilitate and moderate this webinar session.

September 6, 2012

10:00 AM CDT

<https://connect.extension.iastate.edu/urbancop>

Pesticide Residues in the Indoor Environment: Assessment and Health Effect

On August 29, 2012 at 1pm EDT, the American College of Medical Toxicology (ACMT) will be hosting a 90-minute webinar on Pesticide Residues in the Indoor Environment: Assessment and Health Effect.

Developed by Daniel Sudakin, MD, MPH, FACMT who is an Associate Professor of Environmental and Molecular Toxicology at Oregon State University in Corvallis, OR, this webinar has been developed as part of ACMT's Cooperative Agreement with ATSDR (#U61TS000117-03).

This webinar is free to all attendees and will be broadcast on ACMT's WebEx Event Center platform. All participants will have the opportunity to watch Dan give his presentation and listen to a live simultaneous audio stream over the computer. Questions can be submitted in real time via the platform's Q&A function. CE/CME is available to all participants.

Space is limited and pre-registration is required. Below is a link to sign up for the webinar. Please contact ACMT if you have any questions about this exciting event.

To register for the online event

1. Go to <https://acmtevents.webex.com/acmtevents/onstage/g.php?d=660991070&t=a&EA=info%40acmt.net&ET=57a32704fe6ae7ffa11cc020123f4619&ETR=5b7d3d5b0d19526a9d3d61de0f4d046a&RT=MIM1&p>

2. Click "Register".

3. On the registration form, enter your information and then click "Submit".

Once the host approves your registration, you will receive a confirmation email message with instructions on how to join the event.

UT YEAH Contact Information:

Karen Vail, Ph.D., Professor,
 Urban IPM Specialist, UT Extension
 205 Ellington Plant Sciences Bldg.
 2431 Joe Johnson Drive
 Knoxville, TN 37996-4560
 ph: (865) 974-7138
 fax: (865) 974-4744
 email: kvail@utk.edu
 web: <http://schoolipm.utk.edu>
<http://eppserver.ag.utk.edu/personnel/Vail/vail.htm>



Martha Keel, Ph.D., Professor
 Housing & Environmental Health Specialist,
 UT Extension
 218 Morgan Hall
 ph: (865) 974-8197
 fax: (865) 974-5370
 email: mkeel@utk.edu
 web <http://utyeah.utk.edu>

**Comments or questions
 on this newsletter?
 Contact kvail@utk.edu**

James P. Parkman, Ph.D.
 Former UTIA IPM Coordinator
 205 Ellington Plant Sciences Bldg.
 ph: (865) 974-7135
 fax: (865) 974-4744
 email: jparkman@utk.edu

Mary Rogge, Ph.D., Assc. Professor
 UT College of Social Work
 225 Henson Hall
 ph: (865) 974-7500
 fax: (865) 974-4803
 email: mrogge@utk.edu

The University of Tennessee is an EEO/AA/Title VI/Title IX/Section 504/ADA/ADEA institution in the provision of its education and employment programs and services. All qualified applicants will receive equal consideration for employment without regard to race, color, national origin, religion, sex, pregnancy, marital status, sexual orientation,

For more information about IPM in Tennessee schools and other facilities, or to view past issues of *Pests and Pesticides in Child-serving Facilities*, please visit schoolipm.utk.edu or utyeah.utk.edu

NATIONAL IPM INFORMATION

eXtension's Pest Management In and Around Structures: Urban Integrated Pest Management
<http://www.extension.org/Urban%20Integrated%20Pest%20Management>

National School IPM
schoolipm.ifas.ufl.edu/

IPM in Schools Texas
schoolipm.tamu.edu/resources.htm

IPM Institute of North America
www.ipminstitute.org/

School IPM PMSP—all schools IPM by 2015
http://www.ipminstitute.org/school_ipm_2015.htm

National Pest Management Association IPM
www.whatisipm.org/

EPA schools
www.epa.gov/pesticides/ipm/schoolipm/index.html

For further information about the IPM program at your school or in your county, contact your county Extension Agent or the school IPM Coordinator. For county agent contact information, please visit www.agriculture.utk.edu/personnel/districts_counties/default.asp

Precautionary Statement

To protect people and the environment, pesticides should be used safely. This is everyone's responsibility, especially the user. Read and follow label directions carefully before you buy, mix, apply, store or dispose of a pesticide. According to laws regulating pesticides, they must be used only as directed by the label.

Disclaimer

This publication contains pesticide recommendations that are subject to change at any time. The recommendations in this publication are provided only as a guide. It is always the pesticide applicator's responsibility, by law, to read and follow all current label directions for the specific pesticide being used. The label always takes precedence over the recommendations found in this publication.

Use of trade or brand names in this publication is for clarity and information; it does not imply approval of the product to the exclusion of others that may be of similar, suitable composition, nor does it guarantee or warrant the standard of the product. The author(s), the University of Tennessee Institute of Agriculture and University of Tennessee Extension assume no liability resulting from the use of these recommendations.

Programs in agriculture and natural resources, 4-H youth development, family and consumer sciences, and resource development. University of Tennessee Institute of Agriculture, U.S. Department of Agriculture and county governments cooperating. UT Extension provides equal opportunities in programs and employment.